Amendments to the Claims:

The text of all pending claims, (including withdrawn claims) is set forth below. Canceled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (canceled), (withdrawn), (new), (previously presented), or (not entered).

Applicant reserves the right to pursue any canceled claims at a later date.

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.-17. (canceled)

18. (currently amended) A method for determining stress of at least one turbine blade or vane of a plurality of turbine blades or vanes that are arranged in rows of a turbine machine, comprising:

providing at least one electromagnetic wave emitter for emitting at least one electromagnetic emission wave;

providing at least one electromagnetic wave receiver for receiving at least one electromagnetic receive wave;

converting the electromagnetic emission wave into the electromagnetic receive wave by at least partially reflecting the electromagnetic emission wave by providing the at least one turbine blade or vane with a reflection surface arranged on a contoured airfoil surface of the blade or vane;

arranging the electromagnetic wave emitter and the electromagnetic wave receiver at at least one location between the blade or vane rows and operatively connected to the reflection surface of the blade or vane;

matching the electromagnetic emission wave to a surface form of the blade or vane;

emitting the electromagnetic emission wave by the electromagnetic wave emitter;

converting the electromagnetic emission wave into the electromagnetic receive wave by the reflection surface of the blade or vane;

receiving the electromagnetic receive wave by the electromagnetic wave receiver; and

determining the stress of the blade or vane by frequency analysis to assist in determining component integrity by analyzing the received electromagnetic receive wave to effect an evaluation of the reflection surface by the at least one analyzer.

19. (previously presented) The method according to claim 18, wherein the method is executed to determine the stress of both a turbine blade and a guide vane.

20. (previously presented) The method according to claim 18, wherein analyzing the received electromagnetic wave comprises an evaluation of a surface quality of the reflection surface used for determining the stress.

21. (previously presented) The method according to claim 20, wherein the matched electromagnetic emission wave comprises a wavelength based on a shape of the reflection surface.

22. (previously presented) The method according to claim 20, wherein the evaluation of the surface quality comprises detecting an intensity of the electromagnetic receive wave.

23. (previously presented) The method according to claim 18, wherein analyzing the received electromagnetic wave comprises an evaluation of a vibration status of the reflection surface used for determining the stress.

24. (previously presented) The method according to claim 23, wherein emitting the electromagnetic emission wave comprises at least one electromagnetic emission wave having a wavelength based on a surface shape of the reflection surface.

25. (previously presented) The Method according to claim 23, wherein the evaluation of the vibration status comprises comparing a frequency of the electromagnetic emission wave and to a frequency of the electromagnetic receive wave.

26. (previously presented) The method according to claim 18, wherein analyzing the received electromagnetic wave comprising an evaluation of a surface quality of the reflection surface and an evaluation of a vibration status of the reflection surface, wherein the surface quality and the vibrational status are used for determining the stress.

27. (previously presented) The method according to claim 26, wherein the evaluation of the surface quality and the evaluation of the vibrational status are executed simultaneously.

28. (previously presented) The method according to claim 18, wherein determining the stress of the turbine component is executed while an operation of the turbine machine.

29. (previously presented) The method according to claim 18, wherein the electromagnetic emission wave is a radar wave.

30. (currently amended) A turbine machine, having a device for determining a stress of at least one turbine blade or vane of a plurality of turbine blades or vanes that are arranged in rows of the turbine machine, comprising:

at least one electromagnetic wave emitter for emitting at least one electromagnetic emission wave that is matched to a surface form of the blade or vane;

at least one electromagnetic wave receiver for receiving at least one electromagnetic receive wave; and

at least one analyzer for analyzing the electromagnetic receive wave that evaluates the reflection surface used for determining the stress via frequency analysis,

the turbine blade or vane comprising a reflection surface for converting the electromagnetic emission wave into the electromagnetic receive wave by at least partially reflecting the electromagnetic emission wave where the reflection surface is arranged on a contoured airfoil surface of the blade or vane, and

the electromagnetic wave emitter and the electromagnetic wave receiver arranged at at least one location between the turbine blade or vane rows and operatively connected to the reflection surface of the turbine blade or vane.

31. (previously presented) The turbine machine according to claim 30, wherein the electromagnetic wave emitter and the electromagnetic wave receiver are operatively connected to the reflection surface such that by emitting the electromagnetic emission wave converting the electromagnetic emission wave into the electromagnetic receive wave and receiving the electromagnetic receive wave occur.

32. (previously presented) The turbine machine according to claim 30,

further comprising a housing with a turbine channel in which the component rows are arranged.

33. (previously presented) The turbine machine according to claim 30, wherein the electromagnetic wave emitter comprises an electric vibration generator for generating an electric vibration and a transformer for transforming the electric vibration into the electromagnetic emission wave.

34. (previously presented) The turbine machine according to claim 30, wherein the electromagnetic wave emitter and the electromagnetic wave receiver form one integrated unit.

35. (previously presented) The turbine machine according to claim 30, further comprising a radar antenna included in the electronic wave emitter or in the electronic wave receiver.

36. (previously presented) The turbine machine according to claim 30, wherein the turbine machine is a gas turbine.

37. (currently amended) A device for determining stress of at least one turbine blade or vane of a plurality of turbine blades or vanes that are arranged in rows of the turbine machine, comprising:

at least one electromagnetic wave emitter for emitting at least one electromagnetic emission wave that is matched to a surface form of the blade or vane;

at least one electromagnetic wave receiver for receiving at least one electromagnetic receive wave; and

at least one analyzer for analyzing the electromagnetic receive wave that evaluates the reflection surface used for determining the stress via frequency analysis,

the turbine ~~component~~ blade or vane comprising a reflection surface for converting the electromagnetic emission wave into the electromagnetic receive wave by at least partially reflecting the electromagnetic emission wave where the reflection surface is arranged on a contoured airfoil surface of the blade or vane, and

the electromagnetic wave emitter and the electromagnetic wave receiver sized and configured to be arranged at at least one location between the turbine blade or vane rows and operatively connectable to the reflection surface of the turbine blade or vane.